**Assignment 2**

**United** International **University (UIU)**

**Dept. of Computer Science & Engineering (CSE)**

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| **1.** | In 2018, a research study named CRISPR baby experiment was conducted by Chinese scientist He Jiankui. In this controversial study, He Jiankui used CRISPR-Cas9 gene-editing technology to alter the DNA of embryos, leading to the birth of twin girls with modified genes. He aimed to confer resistance to HIV by disabling the CCR5 gene, which HIV uses to enter human cells.  However, there were significant concerns about whether the parents of the twins fully understood the risks and implications of the gene-editing procedure. The long-term effects of gene editing on humans were not well understood. The experiment exposed the babies to unknown risks, including potential unintended genetic changes and health issues that could arise later in life. Also, the research was conducted in secrecy without the oversight or approval of relevant ethical review boards. The experiment was not subject to the usual scientific peer review process, raising concerns about the rigor and integrity of the research.  The international outcry following the announcement of the CRISPR babies led to He Jiankui being widely condemned by the scientific community. He was later sentenced to prison for violating medical regulations and conducting the experiment without proper authorization. This case underscores the critical importance of adhering to ethical standards in scientific research, especially when it involves human subjects and potentially heritable genetic changes.  In your opinion, what are the ethical issues violated in this research study? Justify your reasoning. | ***[10]*** |
| **2.** | Consider the following scenario describing busy professional man named Abir:  Mr. Abir is a 35-year-old freelance graphic designer. He grew up in a big metropolitan city, always fascinated by art and design. Even as a kid, he loved drawing and playing around with digital art on his family's computer. After finishing school, Abir went to art college to study graphic design. There, he learned all the basics of design like colors, fonts, and layout. When he graduated, Abir decided to work as a freelance graphic designer. He liked the idea of being his own boss and having the freedom to work on different projects. Over time, Abir built up a strong portfolio of work. He did projects for lots of different companies, from fashion brands to tech startups. People liked his work because it was creative and unique. But being a freelancer wasn't always easy. Abir had to deal with tricky clients and tight deadlines. Sometimes, he'd get stuck and struggle to come up with new ideas. Despite the challenges, Abir kept pushing himself to improve. He found inspiration everywhere, from the streets of his city to the internet. For Abir, graphic design wasn't just a job—it was a journey of creativity and self-discovery. And he was determined to make the most of it. Now, he wants more recognition across different countries of the world.  Create a **user persona** for Mr. Abir reflecting his **needs, challenges, abilities,** and **preferences** (use a rectangular box for the persona’s image). | ***[10]*** |